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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,431

09/28/2005

Christopher Davies

UDL-123

7625

36822 7590 06/17/2009

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SUITE 407

STAMFORD, CT 06902

EXAMINER

DEO, DUY VU NGUYEN

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

06/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/522,431	<b>Applicant(s)</b> DAVIES, CHRISTOPHER	
	<b>Examiner</b> Duy-Vu N. Deo	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2, 5, 6, 13, 15, 16, 18-24, 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 5, 6, 13, 15, 16, 18-24, 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5, 6, 13, 15, 16, 18-24, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawton et al. (US 6,347,976) and in view of Rubey, III et al. (US 5,588,901).

Lawton teaches a method of removing paint and/or coating from automobiles or aircraft (col. 1, line 24-26) comprising directing a supply of particulate or particle stream toward a target zone of target material on the substrate (col. 2, line 55-60; col. 3, line 34-42) and directing a radiant energy source such as infrared to UV to pyrolyze the coating (col. 3, line 12-16; col. 5, line 20-25; col. 7, line 20-25). Unlike claimed invention, Lawton doesn't describe the particulate material, such as bicarbonate of soda, is in solid state at ambient temperature. However, using such abrasive particulate is well known to one skilled in the art for a cleaning process at the time of the invention was made as shown here by Rubey (col. 1, line 41-50). One skilled in the art would find it obvious to use such particulate in light of Rubey because he teaches that it is not toxic and can clean softer substrate including Al or plastic component (col. 1, line 42-50) and Lawton teaches that such abrasive material is used for the cleaning process (col. 6, line

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35; col. 7, line 40, 41). Also, using known cleaning material without changes in their respective functions would have yielded predictable results to one skilled in the art at the time of the invention was made.

This would read on claimed the interaction between the radiant optical energy and the particulate material is thermal interaction, or sublimation interaction evolving a gas having a blast effect at the target zone (or the radiant optical energy produces a sublimation interaction between the radiant optical energy and the particulate material).

Referring to claim 12, the particulate includes CO<sub>2</sub> pellets (claimed solid state at ambient temperature) (col. 3, lines 30, 31).

Referring to claim 19, the particulate or particle stream must be delivered entrained in a transport gas in order to direct the stream at the substrate through a nozzle (col. 3, lines 37-40).

Referring to claim 23, the spectrum of the radiant optical energy would have to be varied in a controlled manner.

Referring to claims 13 and 22, even though Lawton is silent about the radiant optical energy is delivered as one of a pulse or a series of pulses and the energy density at the target zone is in the range between 5 J/cm<sup>3</sup> and 150 J/cm<sup>3</sup>. However it is obvious to one skilled in the art to use the optical energy in anyway and determine the energy density through routine experimentation as long as it would provide enough energy for the pyrolysis process.

Referring to claim 15, directing the particulate material across the target zone in a direction transverse to the direction of the radiant optical energy would be obvious to

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one skilled in the art because it would ensure the particulate material and the radiant optical energy to cover the target area without one block the other.

Referring to claim 20, using pressurized air as the transport gas is obvious to deliver a solid material through a nozzle.

Referring to claims 21, 24, using any apparatus including claimed flashlamp delivery system to deliver the radiant optical energy and deliver the particulate material and the radiant optical energy in a combined delivery unit that is portable or hand held manipulate would be obvious as long as it can deliver the light energy to the substrate.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 2, 5, 6, 13, 15, 16, 18-24, 26 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy-Vu N. Deo whose telephone number is 571-272-1462. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duy-Vu N Deo/  
Primary Examiner, Art Unit 1792

6/16/09